

U.S. ARMY CORPS OF ENGINEERS PORTLAND DISTRICT

ENGINEERING AND CONSTRUCTION PRODUCT DEVELOPMENT QUALITY MANAGEMENT SYSTEM

POLICY AND PROCEDURE MANUAL

ISSUE NO. 0

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THE QUALITY MANAGEMENT SYSTEM.**

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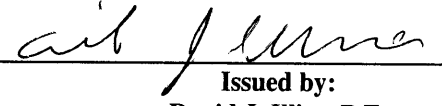
INTRODUCTION

This manual defines and documents Engineering and Construction Division's Quality Management System (QMS) for development of planning, engineering, and construction products. The policies and procedures contained herein outline management's responsibilities for establishing, implementing, maintaining and communicating the QMS to our employees and customers.

This QMS is an extension of our Total Quality Management (TQM) and Project Management business processes. It supports our efforts to become the engineering agency of choice and to achieve the Corps Vision. This system establishes a structured foundation that promotes positive actions of inspection, quality control, quality assurance and strategic planning to support the continuous improvement of planning, engineering, and construction products, and to ensure conformance to our policies, procedures, and requirements.

Questions or comments concerning this manual and/or QMS administration may be directed to David J. Illias, Management Representative at (503) 808-4901.


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ENGINEERING AND CONSTRUCTION
PRODUCT DEVELOPMENT

QUALITY MANAGEMENT SYSTEM

POLICY AND PROCEDURE MANUAL

PART I - POLICY

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QUALITY POLICY

Engineering and Construction Division is committed to developing and providing engineering, scientific, and construction management services meeting or exceeding customer requirements, on time, and within budget, and is dedicated to continuously improving our business processes and products.

SCOPE AND OBJECTIVES

SCOPE: The policy and procedures described herein apply to the work activities and personnel of the U.S. Army Corps of Engineers, Portland District, who are assigned specific responsibilities for the development of planning, engineering, and construction products.

OBJECTIVES: On a continuous basis, the Portland District plans, designs, and constructs environmentally viable water resources projects through development, execution, measurement, and adjustments of work processes. In support of these efforts, this Quality Management System is intended to meet these objectives:

- integrate our policies and procedures with Portland District's Project Management Business Process;
- identify technical requirements and customer needs prior to starting work;
- coordinate with the customer during and at completion of work to compare needs and requirements with results;
- assure technical adequacy of every engineering and construction product developed;
- identify areas of success or where improvements can be made for future use.

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Part I - Policy Revision Record

DATE	REVISION NO.	DESCRIPTION
31 Jul 03	1	Section 2: Added QMS flowchart and updated CM flowchart
31 Jul 03	1	Section 5: Changed Note 1 to reflect use of PMP
31 Jul 03	1	Appendix C, Quality Plan (QP) definition changed to Project Management Plan (PMP)

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SECTION 1

MANAGEMENT ORGANIZATION

1.1 PURPOSE

This section defines Engineering and Construction Division's (EC) organizational responsibilities for the management and implementation of activities associated with the management system employed to develop engineering products.

1.2 SCOPE

The accountability and responsibility for the quality of EC products produced by Portland District rests with all employees involved in the development of such products regardless of their organizational location.

1.3 POLICY

1.3.1 EC maintains an organizational structure that defines responsibilities, authority and lines of communication for areas that affect product and service quality.

1.3.2 The quality policy defines EC's commitment to quality engineering products and toward satisfying our customers. The EC product development policy is displayed in various locations throughout EC. This policy is initially explained during orientation training of new employees so that each employee thoroughly understands the policy.

1.3.3 Portland District's organization chart is available on the district LAN at <https://w3.nwp.usace.army.mil/Rm/M.coe/images/orgchart.pdf>. Functional statements for Portland District organizations are included in district regulation: NPPR 10-1-3. The following summaries describe the relative authority and responsibility of the staff who manage, perform, and verify work affecting product quality.

a. Chief, Engineering and Construction Division (EC) is responsible for: the overall establishment, execution, and effectiveness of the engineering product development portion of the quality management system (QMS); providing general direction of activities of EC; promulgation of instructions with respect to EC operations; managing and providing the services associated with EC capabilities; and chairing a management review meeting at least quarterly. The management review meeting agenda shall include a review of the effectiveness of the management system, maintenance of the Policy and Procedure Manual, adequacy of resources and training, internal audit and corrective action effectiveness, and verification.

b. Each EC Branch Chief is responsible for the following actions:

(1) The planning, organization, coordination, and efficient execution of work in their respective Branch.

(2) Setting priorities with regard to resource constraints.

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(3) Managing product quality by developing, maintaining, and coordinating positive control of quality related aspects, and using an audit system that includes monitoring and reporting to assure compliance with quality assurance provisions and the ISO 9001 standard.

(4) Providing management with an independent quality performance evaluation for each department.

(5) Directing corrective/preventive action on all problems related to costs, resources, work progress, and material requirements.

(6) Executing and monitoring key performance measures related to Command Management Review criteria.

(7) Developing key performance measures to evaluate the effectiveness of the QMS and to evaluate progress in adopting the continuous improvement concept.

(8) Overall compliance with this quality system.

(9) Assuring all employees in their Branch are familiar with and understand the QMS.

(10) Active participation in the leadership of Portland District.

c. Each EC Section Chief is responsible for accomplishing all work as assigned and related to the technical discipline of their department.

d. Each EC employee is responsible for:

- (1) Understanding the requirements for producing quality products.
- (2) Understanding their involvement and influence in product development.
- (3) Performing work in accordance with our policies and procedures.

1.4 APPLICABLE PROCEDURES

Compliance with this policy is achieved through conformance to the responsibilities described in paragraph 4.0 of each procedure contained in the Policy and Procedure Manual.

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SECTION 2

QUALITY MANAGEMENT SYSTEM (QMS)

2.1 GENERAL REQUIREMENTS

This policy establishes the requirements for EC to document, implement, and maintain a quality management system and continually improve its effectiveness in accordance with the requirements of ISO 9001-2000.

EC shall

- (a) identify the process(es) needed for the QMS and their application throughout EC,
- (b) determine the sequence and interaction of these processes,
- (c) determine criteria and methods needed to ensure that both the operation and control of these processes are effective,
- (d) ensure the availability of resources and information necessary to support the operation and monitoring of these processes,
- (e) monitor, measure, and analyze these processes, and
- (f) implement actions necessary to achieve planned results and continual improvement of these processes.

These processes shall be managed by EC in accordance with the requirements of ISO 9001-2000.

Where EC chooses to outsource any process that affects product conformity with requirements, EC shall ensure control over such processes. Control of such outsourced processes shall be identified within the quality management system.

NOTE: Within the EC QMS process (see figure 2-1), EC uses two processes to develop EC products: the EC Design Process and the EC Construction Management Process. Each process entails subprocesses that are described by procedure(s) that govern product development for each subprocess. The EC Design Process precedes the EC Construction Management Process. All of these processes are presented as flow charts with brief narrative at the end of this SECTION.

2.2 DOCUMENTATION REQUIREMENTS

2.2.1 General. The QMS documentation shall include

- (a) documented statements of a project management plan (PMP) and quality objectives,
- (b) a quality manual,
- (c) documented procedures required by QMS POLICY,
- (d) documents needed by EC to ensure the effective planning, operation, and control of its processes, and

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(e) records required by QMS POLICY (see 2.2.4 of this SECTION).

NOTE 1: where the term “documented procedure” appears within a POLICY SECTION, this means that the procedure is established, documented, implemented, and maintained.

NOTE 2: The extent of the QMS documentation can differ from one part of EC to another due to

- (a) the size of EC element and type of activities,
- (b) the complexity of processes and their interactions, and
- (c) the competence of personnel.

NOTE 3: The documentation can be in any form or type of medium.

2.2.2 Quality Manual. EC shall establish and maintain a quality manual that includes

- (a) the scope of the QMS, including details of and justification for any exclusions,
- (b) the documented procedures established for the QMS, or reference to them, and
- (c) a description of the interaction between the processes of the QMS.

2.2.3 Control of Documents. Documents required by the quality management system shall be controlled. Records are a special type of document and shall be controlled according to the requirements given in 2.2.4 of this SECTION.

A documented procedure shall be established to define the controls needed

- (a) to approve documents for adequacy prior to issue,
 - (b) to review and update as necessary and re-approve documents,
 - (c) to ensure that changes and the current revision status of documents are identified,
 - (d) to ensure that relevant versions of applicable documents are available at points of use,
 - (e) to ensure that documents remain legible and readily identifiable,
 - (f) to ensure that documents of external origin are identified and their distribution controlled,
- and
- (g) to prevent the unintended use of obsolete documents, and to apply suitable identification to them if they are retained for any purpose.

2.2.4 Control of Records. Records shall be established and maintained to provide evidence of conformity to requirements and of the effective operation of the quality management system. Records shall remain legible, readily identifiable, and retrievable. A documented procedure shall be established to define the controls needed for the identification, storage, protection, retrieval, retention time, and disposition of records.

2.3 APPLICABLE PROCEDURES

Compliance with this policy is achieved through conformance to all QMS procedures included in this Manual.

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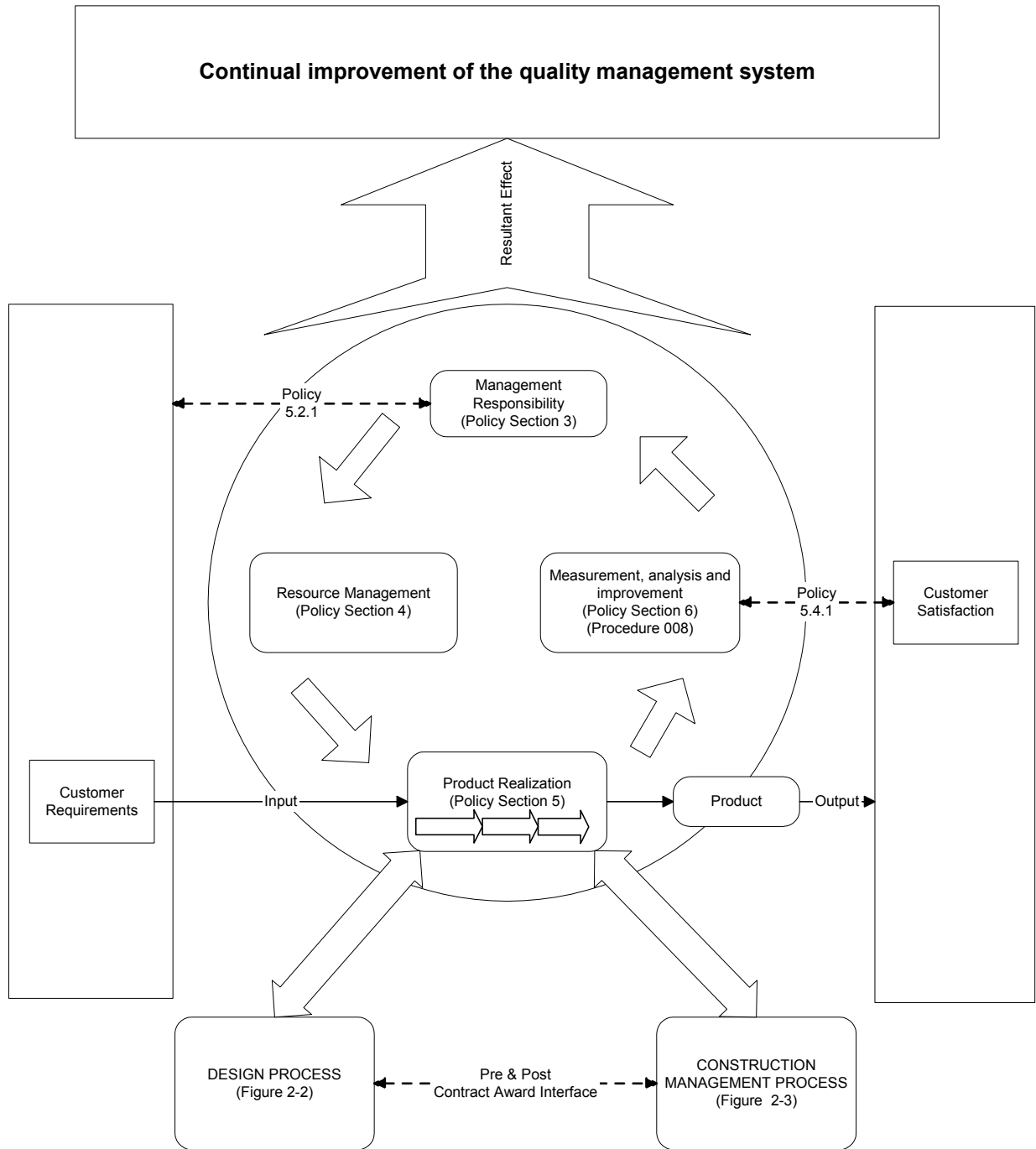
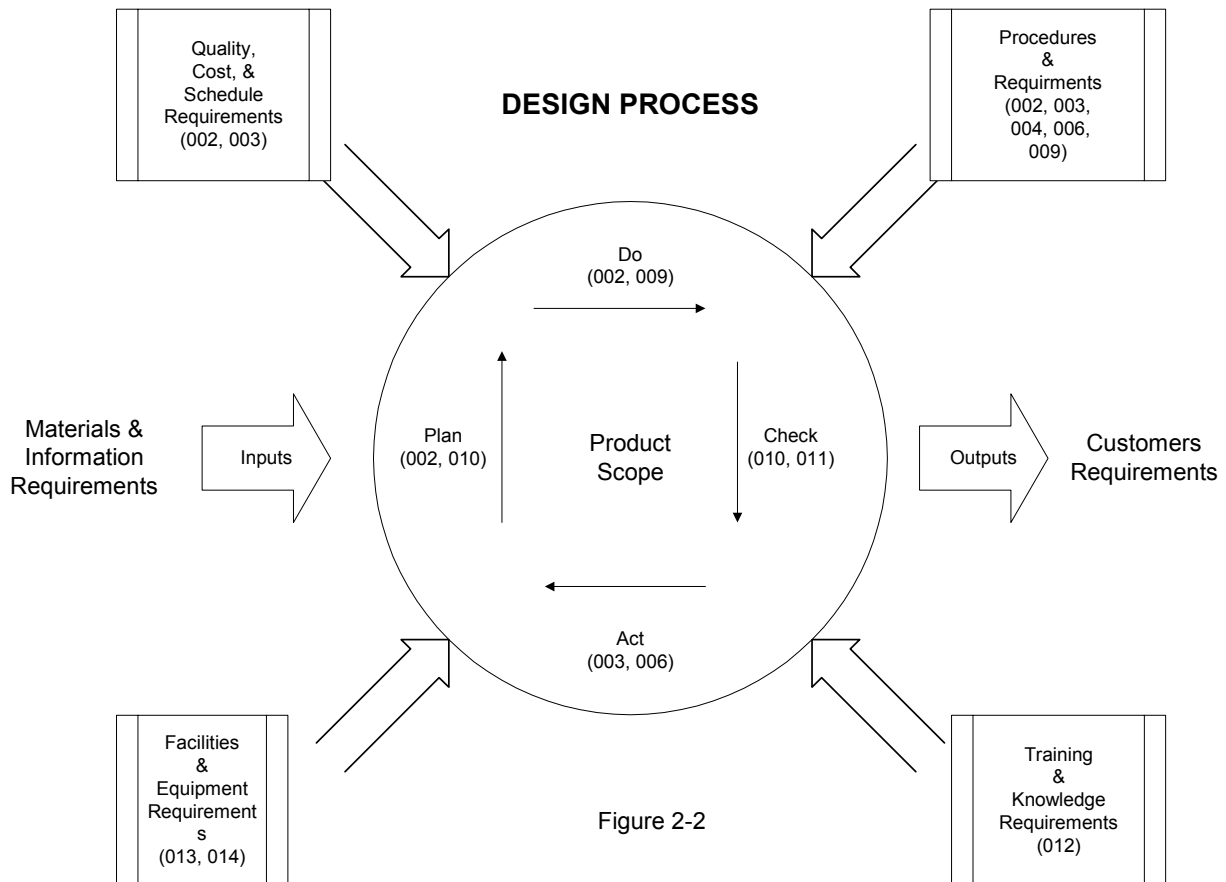


Figure 2-1

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QMS procedures incorporated in the Design Process include:

- Procedure 002 – Product Development and Scoping Work
- Procedure 003 – Revising Work Scope
- Procedure 004 – Performing Technical Review
- Procedure 006 – Performing Engineering During Construction
- Procedure 007 – Purchase of Architect-Engineer and Professional Services
- Procedure 009 – Control of Quality Records
- Procedure 010 – Corrective and Preventive Action
- Procedure 011 – Control of Nonconforming Product
- Procedure 012 – Training Needs
- Procedure 013 – Certification of Inspection, Measuring, and Test Equipment
- Procedure 014 – Verification of Test Software



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QMS procedures incorporated in the Construction Management Process include:

- Procedure 002 – Product Development and Scoping Work
- Procedure 003 – Revising Work Scope
- Procedure 005 – Execution of Construction Contract Work
- Procedure 006 – Performing Engineering During Construction
- Procedure 007 – Purchase of Architect-Engineer and Professional Services
- Procedure 009 – Control of Quality Records
- Procedure 010 – Corrective and Preventive Action
- Procedure 011 – Control of Nonconforming Product
- Procedure 012 – Training Needs
- Procedure 013 – Certification of Inspection, Measuring, and Test Equipment

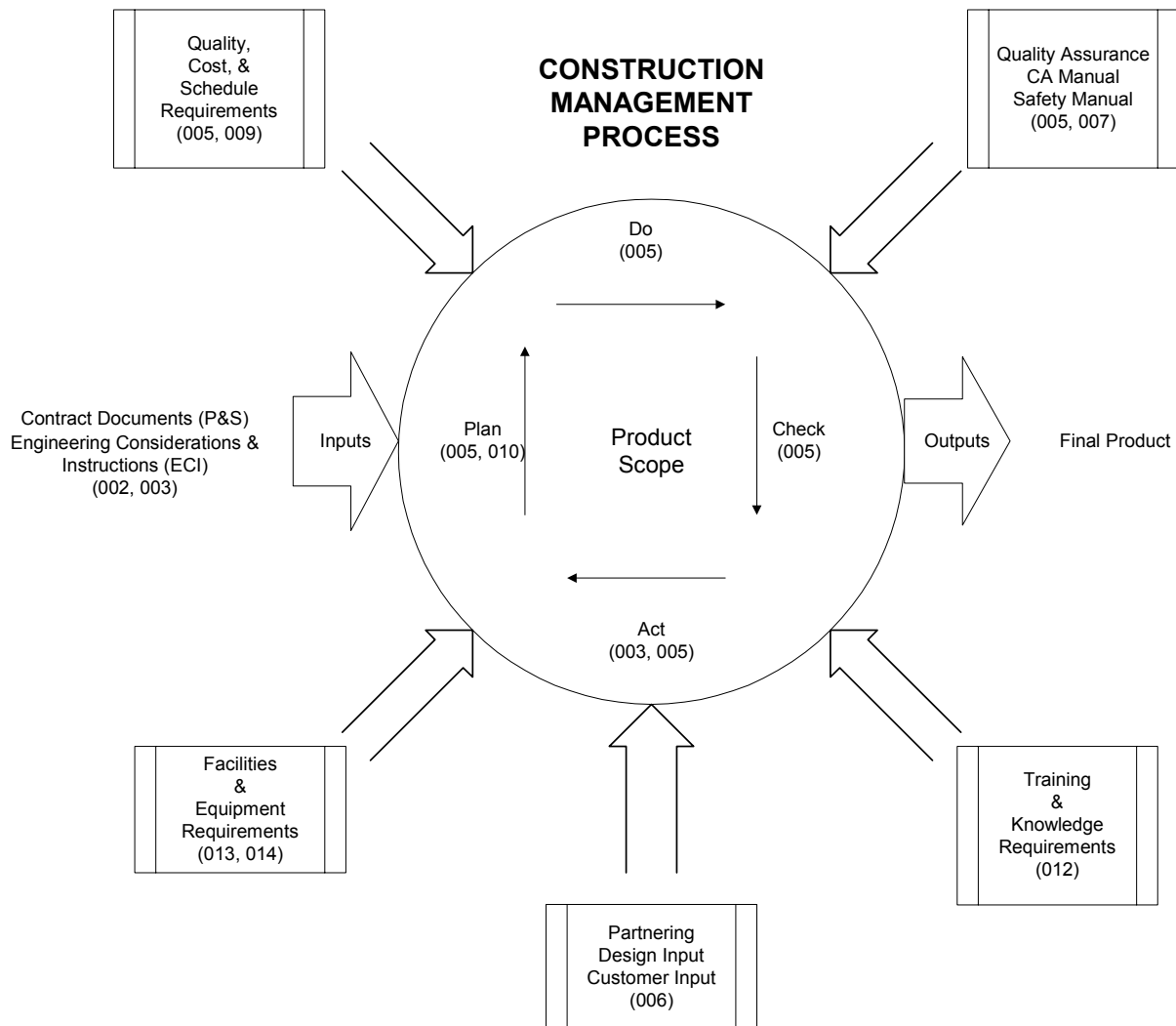


Figure 2-3

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SECTION 3

MANAGEMENT RESPONSIBILITY

3.1 MANAGEMENT COMMITMENT

Top management shall provide evidence of its commitment to the development and implementation of the quality management system and continually improving its effectiveness by

- (a) communicating to EC the importance of meeting customer as well as statutory and regulatory requirements,
- (b) establishing the quality policy,
- (c) ensuring that quality objectives are established,
- (d) conducting management reviews, and
- (e) ensuring the availability of resources.

3.2 CUSTOMER FOCUS

Top management shall ensure that customer requirements are determined and are met with the aim of enhancing customer satisfaction (see 5.2.1 of POLICY SECTION 5 and 6.2.1 of POLICY SECTION 6).

3.3 QUALITY POLICY

Top management shall ensure that the quality policy

- (a) is appropriate to the purpose of EC,
- (b) includes a commitment to comply with requirements and continually improve the effectiveness of the quality management system,
- (c) provides a framework for establishing and reviewing quality objectives,
- (d) is communicated and understood within EC, and
- (e) is reviewed for continuing suitability.

3.4 PLANNING

3.4.1 Quality Objectives. Top management shall ensure that quality objectives, including those needed to meet requirements for products [see 5.1(a) of POLICY SECTION 5], are established at relevant functions and levels within EC. The quality objectives shall be measurable and consistent with the quality policy.

3.4.2 Quality Management System Planning. Top management shall ensure that

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- (a) the planning of the quality management system is carried out in order to meet the requirements given in 2.1 of POLICY SECTION 2 as well as the quality objectives, and
- (b) the integrity of the quality management system is maintained when changes to the quality management system are planned and implemented.

3.5 RESPONSIBILITY, AUTHORITY, AND COMMUNICATION

3.5.1 Responsibility and Authority. Top EC management shall ensure that responsibilities and authorities are defined and communicated within EC.

3.5.2 Management Representative. Top EC management shall appoint a member of management who, irrespective of other responsibilities, shall have responsibility and authority that includes

- (a) ensuring that processes needed for the quality management system are established, implemented, and maintained,
- (b) reporting to top management on the performance of the quality management system and any need for improvement, and
- (c) ensuring the promotion of awareness of customer requirements throughout EC.

NOTE: The responsibility of a management representative can include liaison with external parties on matters relating to the quality management system.

3.5.3 Internal Communication. Top management shall ensure that appropriate communication processes are established within EC and that communication takes place regarding the effectiveness of the quality management system.

3.6 MANAGEMENT REVIEW

3.6.1 General. Top management shall review the QMS at planned intervals to ensure its continuing suitability, adequacy, and effectiveness. This review shall include assessing opportunities for improvement and the need for changes to the quality management system, including the quality policy and quality objectives.

Records from management reviews shall be maintained (see 2.2.4 of POLICY SECTION 2).

3.6.2 Review Input. The input to management review shall include information on

- (a) results of audits,
- (b) customer feedback,
- (c) process performance and product conformity,
- (d) status of preventive and corrective actions,
- (e) follow-up actions from previous management reviews,
- (f) changes that could affect the quality management system, and
- (g) recommendations for improvement.

3.6.3 Review Output. The output from the management review shall include any decisions and actions related to

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- (a) improvement of the effectiveness of the quality management system and its processes,
- (b) improvement of product related to customer requirements, and
- (c) resource needs.

3.7 APPLICABLE PROCEDURES

Compliance with this policy is achieved through conformance to all QMS procedures included in this Manual.

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SECTION 4

RESOURCE MANAGEMENT

4.1 PROVISION OF RESOURCES

EC shall determine and provide the resources needed

- (a) to implement and maintain the quality management system and continually improve its effectiveness, and
- (b) to enhance customer satisfaction by meeting customer requirements.

4.2 HUMAN RESOURCES

4.2.1 General. Personnel performing work affecting product quality shall be competent on the basis of appropriate education, training, skills, and experience.

4.2.2 Competence, Awareness, and Training. EC shall

- (a) determine the necessary competence for personnel performing work affecting product quality,
- (b) provide training or take other actions to satisfy these needs,
- (c) evaluate the effectiveness of the actions taken,
- (d) ensure that its personnel are aware of the relevance and importance of their activities and they contribute to the achievement of the quality objectives, and
- (e) maintain appropriate records of education, training, skills, and experience (see 2.2.4 of POLICY SECTION 2).

4.3 INFRASTRUCTURE

EC shall determine, provide, and maintain the infrastructure needed to achieve conformity to product requirements. Infrastructure includes, as applicable

- (a) buildings, workspace, and associated utilities,
- (b) process equipment (both hardware and software), and
- (c) supporting services such as transport or communication).

4.4 WORK ENVIRONMENT

EC shall determine and manage the work environment needed to achieve conformity to product requirements.

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4.5 APPLICABLE PROCEDURES

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SECTION 5

PRODUCT REALIZATION

5.1 PLANNING OF PRODUCT REALIZATION

EC shall plan and develop the process needed for product realization. Planning of product realization shall be consistent with the requirements of the other processes of the quality management system (see 2.1 of POLICY SECTION 2).

In planning product realization, EC shall determine the following, as appropriate:

- (a) quality objectives and requirements for the product;
- (b) the need to establish processes, documents, and provide resources specific to the product;
- (c) required verification, validation, monitoring, inspection, and test activities specific to the product and the criteria for product acceptance;
- (d) records needed to provide evidence that the realization processes and resulting product meet requirements (see 2.2.4 of POLICY SECTION 2).

The output of this planning shall be in a form suitable for EC's method of operations.

NOTE 1: A document specifying the processes of the QMS (including the product realization processes) and the resources to be applied to a specific product, project, or contract, can be referred to as a project management plan.

NOTE 2: EC may also apply the requirements given in 5.3 of this SECTION to the development of product realization processes.

5.2 CUSTOMER-RELATED PROCESSES

5.2.1 Determination of Requirements Related to the Product. EC shall determine

- (a) requirements specified by the customer, including the requirements for delivery and post-delivery activities,
- (b) requirements not stated by the customer, but necessary for specific or intended use, where known,
- (c) statutory and regulatory requirements related to the product, and
- (d) any additional requirements determined by EC.

5.2.2 Review of Requirements Related to the Product. EC shall review the requirements related to the product. This review shall be conducted prior to EC's commitment to supply a product to the customer (e.g. submission of tenders, acceptance of contracts or orders, acceptance of changes to contracts or orders) and shall ensure that

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- (a) product requirements are defined,
- (b) contract or order requirements differing from those previously expressed are resolved, and
- (c) EC has the ability to meet the defined requirements.

Records of the results of the review and actions arising from the review shall be maintained (see 2.2.4 of POLICY SECTION 2).

Where the customer provides no documented statement of requirement, the customer requirements shall be confirmed by EC before acceptance.

Where the product requirements are changed, EC shall ensure that relevant documents are amended and that relevant personnel are made aware of the changed requirements.

NOTE: In some situations, such as internet sales, a formal review is impractical for each order. Instead, the review can cover relevant product information such as catalogues or advertising material.

5.2.3 Customer Communication. EC shall determine and implement effective arrangements for communicating with customers in relation to

- (a) product information,
- (b) inquiries, contracts, or order handling, including amendments, and
- (c) customer feedback, including customer complaints.

5.3 DESIGN AND DEVELOPMENT

5.3.1 Design and Development Planning. EC shall plan and control the design and development of product.

During the design and development planning, EC shall determine

- (a) the design and development stages,
- (b) the review, verification, and validation that are appropriate to each design and development stage, and
- (c) the responsibility and authorities for design and development.

EC shall manage the interfaces between different groups involved in design and development to ensure effective communication and clear assignment of responsibility.

Planning output shall be updated, as appropriate, as the design and development progresses.

5.3.2 Design and Development Inputs. Input relating to product requirements shall be determined and records maintained (see 2.2.4 of POLICY SECTION 2). These inputs shall include

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- (a) functional and performance requirements,
- (b) applicable statutory and regulatory requirements,
- (c) where applicable, information derived from previous similar designs, and
- (d) other requirements essential for design and development.

These inputs shall be reviewed for adequacy. Requirements shall be completed, unambiguous, and not in conflict with each other.

5.3.3 Design and Development Outputs. The outputs of design and development shall be provided in a form that enables verification against the design and development input and shall be approved prior to release.

Design and development outputs shall

- (a) meet the input requirements for design and development,
- (b) provide appropriate information for purchasing, production, and for service provision,
- (c) contain or reference product acceptance criteria, and
- (d) specify the characteristics of the product that are essential for its safe and proper use.

5.3.4 Design and Development Review.

At suitable stages, systematic reviews of design and development shall be performed in accordance with planned arrangements (see 5.3.1 of this SECTION)

- (a) to evaluate the ability of the results of design and development to meet requirements, and
- (b) to identify any problems and propose necessary actions.

Participants in such reviews shall include representatives of functions concerned with the design and development stage(s) being reviewed. Records of the results of the reviews and any necessary actions shall be maintained (see 2.2.4 of POLICY SECTION 2).

5.3.5 Design and Development Verification. Verification shall be performed in accordance with planned arrangements (see 5.3.1 of this SECTION) to ensure that the design and development outputs have met the design and development input requirements. Records of the results of the verification and any necessary actions shall be maintained (see 2.2.4 of POLICY SECTION 2).

5.3.6 Design and Development Validation. Design and development validation shall be performed in accordance with planned arrangements (see 5.3.1 of this SECTION) to ensure that the resulting product is capable of meeting the requirements for the specified application or intended use, where known. Wherever practicable, validation shall be completed prior to the delivery or implementation of the product. Records of the results of validation and any necessary actions shall be maintained (see 2.2.4 of POLICY SECTION 2).

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5.3.7 Control of Design and Development Changes. Design and development changes shall be identified and records maintained. The changes shall be reviewed, verified, and validated, as appropriate, and approved before implementation. The review of design and development changes shall include evaluation of the effect of the changes on constituent parts and product already delivered.

Records of the results of the review of changes and any necessary actions shall be maintained (see 2.2.4 of POLICY SECTION 2).

5.4 PURCHASING

5.4.1 Purchasing Process. EC shall ensure that purchased product conforms to specified purchase requirements. The type and extent of control applied to the supplier and the purchased product shall be dependent upon the effect of the purchased product on subsequent product realization or the final product.

EC shall evaluate and select suppliers based on their ability to supply product in accordance with EC's requirements. Criteria for selection, evaluation, and re-evaluation shall be established. Records of the results of evaluations and any necessary action arising from the evaluation shall be maintained (see 2.2.4 of POLICY SECTION 2).

5.4.2 Purchasing Information. Purchasing information shall describe the product to be purchased, including where appropriate

- (a) requirements for approval of product, procedures, processes, and equipment,
- (b) requirements for qualification of personnel, and
- (c) quality management system requirements.

EC shall ensure the adequacy of specified purchase requirements prior to their communication to the supplier.

5.4.3 Verification of Purchased Product. EC shall establish and implement the inspection or other activities necessary for ensuring that purchased product meets specified purchase requirements.

Where EC or its customer intends to perform verification at the supplier's premises, EC shall state the intended verification arrangements and method of product release in the purchasing information.

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5.5 PRODUCT AND SERVICE PROVISION

5.5.1 Control of Production and Service Provision. EC shall plan and carry out production and service provisions under controlled conditions. Controlled conditions shall include, as applicable

- (a) the availability of information that describes the characteristics of the product,
- (b) the availability of work instructions, as necessary,
- (c) the use of suitable equipment,
- (d) the availability and use of monitoring and measuring devices,
- (e) the implementation of monitoring and measurement, and
- (f) the implementation of release, delivery, and post-delivery activities.

5.5.2 Validation of Processes for Production and Service Provision. EC shall validate any processes for production and service provision where the resulting output cannot be verified by subsequent monitoring or measurement. This includes any processes where deficiencies become apparent only after the product is in use or the service has been delivered.

Validation shall demonstrate the ability of these processes to achieve planned results.

EC shall establish arrangements for these processes including, as applicable

- (a) defined criteria for review and approval of the processes,
- (b) approval of equipment and qualification of personnel,
- (c) use of specific methods and procedures,
- (d) requirements for records (see 2.2.4 of POLICY SECTION 2), and
- (e) revalidation.

5.5.3 Identification and Traceability. Where, appropriate, EC shall identify the product by suitable means throughout the product realization.

EC shall identify the product status with respect to monitoring and measurement requirements.

Where traceability is a requirement, EC shall control and record the unique identification of the product (see 2.2.4 of POLICY SECTION 2).

NOTE: In some industry sectors, configuration management is a means by which identification and traceability are maintained.

5.5.4 Customer Property. EC shall exercise care with customer property while it is under EC's control or being used by EC. EC shall identify, verify, protect, and safeguard customer property provided for use or incorporation into the product. If any customer property is lost, damaged, or otherwise found to be unsuitable for use, this shall be reported to the customer and records maintained (see 2.2.4 of POLICY SECTION 2).

NOTE: Customer property can include intellectual property.

5.5.5 Preservation of Product. EC shall preserve the conformity of product during internal processing and delivery to the intended destination. This preservation shall include

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identification, handling, packaging, storage, and protection. Preservation shall also apply to the constituent parts of a product.

5.6 CONTROL OF MONITORING AND MEASURING DEVICES

EC shall determine the monitoring and measurement to be undertaken and the monitoring and measuring devices needed to provide evidence of conformity of product to determined requirements (see 5.2.1 of this SECTION).

EC shall establish processes to ensure that the monitoring and measurement can be carried out and are carried out in a manner that is consistent with the monitoring and measurement requirements.

When necessary to ensure valid results, measuring equipment shall

(a) be calibrated or verified at specified intervals, or prior to use, against measurement standards traceable to international or national measurement standards; where no such standards exist, the basis used for calibration or verification shall be recorded;

(b) be adjusted or re-adjusted as necessary;

(c) be identified to enable the calibration status to be determined;

(d) be safeguarded from adjustments that would invalidate the measurement result;

(e) be protected from damage and deterioration during handling, maintenance, and storage.

In addition, EC shall assess and record the validity of the previous measuring results when the equipment is found not to conform to requirements. EC shall take appropriate action on the equipment and any product affected. Records of the results of calibration and verification shall be maintained (see 2.2.4 of POLICY SECTION 2).

When used in the monitoring and measurement of specified requirements, the ability of computer software to satisfy the intended application shall be confirmed. This shall be undertaken prior to initial use and reconfirmed as necessary.

NOTE: See ISO 10012-1 and ISO 10012-2 for guidance.

5.7 APPLICABLE PROCEDURES

Compliance with this policy is achieved through conformance to all QMS procedures included in this Manual.

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SECTION 6

MEASUREMENT, ANALYSIS, AND IMPROVEMENT

6.1 GENERAL

EC shall plan and implement the monitoring, measurement, analysis, and improvement processes needed

- (a) to demonstrate conformity of the product,
- (b) to ensure conformity of the quality management system, and
- (c) to continually improve the effectiveness of the quality management system.

This shall include determination of applicable methods, including statistical techniques, and the extent of their use.

6.2 MONITORING AND MEASUREMENT

6.2.1 Customer Satisfaction. As one of the measurements of the performance of the quality management system, EC shall monitor information relating to customer perception as to whether EC has met customer requirements. The methods for obtaining and using this information shall be determined.

6.2.2 Internal Audit. EC shall conduct internal audits at planned intervals to determine whether the quality management system

(a) conforms to the planned arrangements (see 5.1 of POLICY SECTION 5), to the requirements of ISO 9001-2000, and to the quality management system requirements established by EC, and

(b) is effectively implemented and maintained.

An audit program shall be planned, taking into consideration the status and importance of the processes and areas to be audited, as well as the results of previous audits. The audit criteria, scope, frequency, and methods shall be defined. Selection of auditors and conduct of audits shall ensure objectivity and impartiality of the audit process. Auditors shall not audit their own work.

The responsibilities and requirements for planning and conducting audits, and for reporting results and maintaining records (see 2.2.4 of Policy Section 2) are defined in Procedure No. 008

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The management responsible for the area being audited shall ensure that actions are taken without undue delay to eliminate detected nonconformities and their causes. Follow-up activities shall include the verification of the actions taken and the reporting of verification results (see 6.5.2 of this SECTION).

NOTE: See ISO 10011-1, ISO 10011-2, and ISO 10011-3 for guidance.

6.2.3 Monitoring and Measurement of Processes. EC shall apply suitable methods for monitoring and, where applicable, measurement of the quality management system processes. These methods shall demonstrate the ability of the processes to achieve planned results. When planned results are not achieved, correction and corrective action shall be taken, as appropriate, to ensure conformity of the product.

6.2.4 Monitoring and Measurement of Product. EC shall monitor and measure the characteristics of the product to verify that product requirements have been met. This shall be carried out to appropriate stages of the product realization process in accordance with the planned arrangements (see 5.1 of POLICY SECTION 5).

Evidence of conformity with the acceptance criteria shall be maintained. Records shall indicate the person(s) authorized release of product (see 2.2.4 of POLICY SECTION 2).

Product release and service delivery shall not proceed until the planned arrangements (see 5.1 of POLICY SECTION 5), have been satisfactorily completed, unless otherwise approved by a relevant authority, and, where applicable, by the customer.

6.3 CONTROL OF NONCONFORMING PRODUCT

EC shall ensure that product which does not conform to product requirements is identified and controlled to prevent its unintended use or delivery. The controls and related responsibilities and authorities for dealing with nonconforming product shall be defined in a [documented procedure](#).

EC shall deal with nonconforming product by one or more of the following ways:

- (a) by taking action to eliminate the detected nonconformity;
- (b) by authorizing its use, release, or acceptance under concession by a relevant authority, and where applicable, by the customer;
- (c) by taking action to preclude its original intended use or application.

Records of the nature of nonconformities and any subsequent actions taken, including concessions obtained, shall be maintained (see 2.2.4 of POLICY SECTION 2).

When nonconforming product is corrected, it shall be subject to re-verification to demonstrate conformity to the requirements.

When nonconforming product is detected after delivery or use has started, EC shall take action appropriate to the effects, or potential effects, of the nonconformity.

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6.4 ANALYSIS OF DATA

EC shall determine, collect, and analyze appropriate data to demonstrate the suitability and effectiveness of the quality management system and to evaluate where continual improvement of the effectiveness of the quality management system can be made. This shall include data generated as a result of monitoring and measurement and from other relevant sources.

The analysis of data shall provide information relating to

- (a) customer satisfaction (see 6.2.1 of this Section),
- (b) conformity to product requirements (see 5.2.1 of Policy Section 5),
- (c) characteristics and trends of processes and products, including opportunities for preventive action, and
- (d) suppliers.

6.5 IMPROVEMENT

6.5.1 Continual Improvement. EC shall continually improve the effectiveness of the quality management system through the use of the quality policy, quality objectives, audit results, analysis of data, corrective and preventive actions and management review.

6.5.2 Corrective Action. EC shall take action to eliminate the cause of nonconformities in order to prevent recurrence. Corrective actions shall be appropriate to the effects of the nonconformities encountered.

A [documented procedure](#) shall be established to define requirements for

- (a) reviewing nonconformities (including customer complaints),
- (b) determining the causes of nonconformities,
- (c) evaluating the need for action to ensure that nonconformities do not occur,
- (d) determining and implementing action needed,
- (e) records of the results of action taken (see 2.2.4 of POLICY SECTION 2), and
- (f) reviewing corrective action taken.

6.5.3 Preventive Action. EC shall determine action to eliminate the causes of potential nonconformities in order to prevent their occurrence. Preventive actions shall be appropriate to the effects of the potential problems.

A [documented procedure](#) shall be established to define requirements for

- (a) determining potential nonconformities and their causes,

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- (b) evaluating the need for action to prevent occurrence of nonconformities,
- (c) determining and implementing action needed,
- (d) records of results of action taken (see 2.2.4 of Policy Section 2), and
- (c) reviewing preventive action taken.

6.6 APPLICABLE PROCEDURES

Compliance with this policy is achieved through conformance to all QMS procedures included in this Manual.

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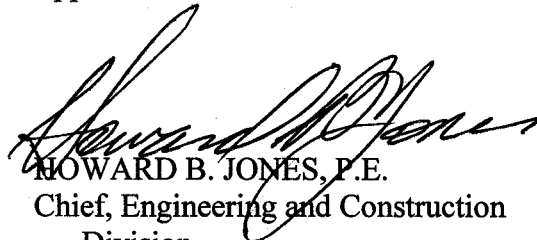
30 OCT 2002

MEMORANDUM THRU CHIEF, CENWP-EC-D

FOR CENWP-EC-D (DAVID J. ILLIAS)

SUBJECT: Management Representative Appointment

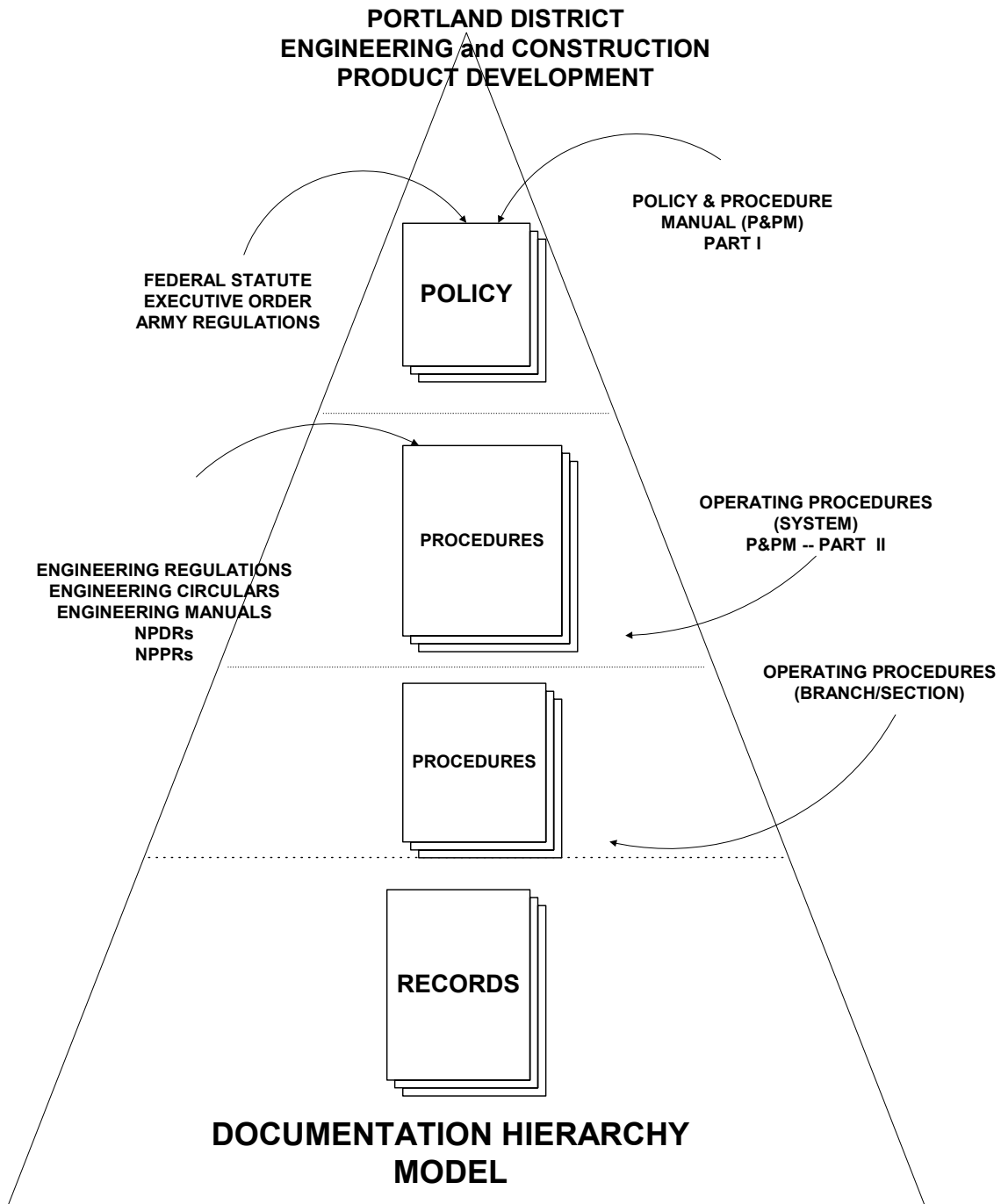
1. You are hereby appointed Management Representative of the planning, engineering, and construction product development Quality Management System.
2. Your duties and responsibilities under this appointment require your proactive involvement to maintain the Quality Management System in conformance with ISO 9000 standards. To achieve this requirement, you are authorized to develop, implement, monitor, measure, administer, continuously modify, revise, and improve the Quality Management System, in order to maintain conformance with ISO 9000 criteria. Included in the administration of your duties is managing the qualifications and certifications of internal audit personnel, managing corrective action requests, conducting follow-up inspections and audits, and assuring verification controls are established.
3. The duties and responsibilities of this appointment are delegable and shall not exceed the authorization scope. The term of this appointment is indefinite until further notice.


HOWARD B. JONES, P.E.
Chief, Engineering and Construction
Division

CF:

All EC Branch Chiefs
Chief PM-F
Chief PM-E

APPENDIX B



This figure identifies the relationship between our Quality Policy, the procedures that guide our work efforts, and the records we keep to document our activities.

APPENDIX C

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APPENDIX C

GLOSSARY

Aerial Photography: Contract flying and photo of defined areas, primarily for mapping purposes. This includes the film and photo hard copies. All aerial photography is performed to standard specifications to assure ground accuracy.

Administrative Contracting Officer (ACO): A person who has completed the required training and experience in the Federal Acquisition Regulations and has received a contracting warrant from the U.S. Army Corps of Engineers, Principle Assistant Regarding Contracting. When designated as an ACO the employee has authority to make payments and issue changes to construction contracts that are within the limits of their warrant.

Architect/Engineer Contract Administration Support System (ACASS): The Department of Defense electronic database containing architect/engineer performance evaluations.

Architect/Engineer Responsibility Coordinator (AERC): An experienced engineer or architect, trained as required in EP 715-1-7, who is responsible for the day-to-day management of the AERMP.

Architect/Engineer Responsibility Management Program (AERMP): A formal process for holding A/E firms accountable for their work and recovering damages to the Government caused by A/E firm negligence.

Architect/Engineer Responsibility Review Board (AERRB): The group responsible for reviewing deficiencies in A/E performance and advising appropriate action. The Chief, EC chairs the AERRB and voting members include at least senior representatives from Planning, Programs and Project Management Division, Construction Branch, and Office of Counsel.

Architect/Engineer (A/E) Services: Architect/engineer services are (1) services that are defined by State law that must be provided by a registered architect-engineer; (2) services of an architectural or engineering nature performed by contract that are associated with research, planning, development, design; and (3) other services of an architectural or engineering nature that architect-engineers may logically perform. Surveying and mapping are A/E services. A contract for mixed work is considered A/E services when those services are substantially or to a dominant extent architectural and/or engineering in nature (PL 92-682 Brooks Bill).

Architect/Engineer Unit: A unit within EC-CR that provides contract administration for Architect/Engineer and professional services contracts.

As-Built Drawings: The updated plans reflecting the actual construction of a project. This includes amendments issued during bidding, modifications during construction, user requested changes, field changes, shop drawing modifications, and contractor designs.

As-Constructed Drawings: Drawings generated and submitted as paper markups or electronic CADD files by the construction contractor that reflect the actual construction of a project.

Beneficial Occupancy: When a nearly complete construction project is ready for the customer to use and take possession of the constructed facility.

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Biddability, Constructibility, Operability, and Environmental (BCOE) Review: A final review of procurement documents that ensures Biddability, Constructibility, Operability, and Environmental aspects of proposed work are considered during design and construction.

Calibration: Measurement or comparison with a specific standard to determine the correct value of each scale reading on measuring or test equipment.

Calibration Equipment: An apparatus that has a known relationship to calibration standards. Used to put measuring and test equipment into acceptable calibration.

Calibration Standards: The accepted reference benchmark used to establish a unit for measurement of a physical quantity.

Central Map Files: A location for storage of project files and other information. Central Map Files is the storage location for project files when storage at the functional Section/Branch is no longer appropriate. Central Map Files will be managed to assure proper retirement of project folders.

Certification: Certification is the official sanction or validation (usually by signature) that technical review has been performed.

Charrette Process: An intensive work session conducted by a facilitator preferably at the potential project site (or in the vicinity) that brings together all stakeholders of a project to identify their needs, concerns, and limitations, and establishes the initial scope and expected outcome. Stakeholders may include customers, users, regulators, city, County, and State officials and agencies, other Federal agencies, and the planners/designers of the product.

Chemical Quality Assurance Report (CQAR): A report that verifies quality of laboratory chemical testing procedures, data, and results.

Computer-Aided Design and Drafting (CADD): The production of drawings, specifications, parts list, and other design-related elements using special graphics- and calculations-intensive computer programs.

Computer-Aided Design and Drafting (CADD) Unit. A unit within EC-CR that manages and provides support for the CADD system.

Consultant Services: Engineering services acquired by purchase from Architect-Engineering firms.

Continuing Authorities Program: The six legislative authorities under which the Secretary of the Army, acting through the Chief of Engineers, is authorized to plan, design, and construct certain types of water resources improvements without specific Congressional authorization.

Continuing Authorities Program Manager (CAP Manager): An individual assigned overall responsibilities for oversight and accomplishment of CAP, Environmental Authority, and Planning Assistance to States product development.

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Contract Administration (CA): A function performed by Construction field personnel in accordance with requirements in the contract and during the execution of construction contracts. Specifically, it covers preparing and negotiating contract modifications, resolving contractor claims, processing contract payments, reviewing contract submittals and payrolls, preparing contract correspondence letters, inputting contract-related information in RMS, and carrying out various other contract administration work.

Contracting Officer: The individual with authority to enter into new contracts, modify existing contracts, and terminate existing contracts. A Contracting Officer must be warranted by the Corps, Principle Assistant Regarding Contracting and satisfy the required training and experience. The Contracting Officer has authority to take all contract actions allowed by law and regulations, but may delegate some authority to Administrative Contracting Officers and Contracting Officer's Representatives.

Contracting Officer's Representative (COR): An individual delegated limited authority from the Contracting Officer to administer a contract. Generally the COR is authorized to approve submittals and schedules, and coordinate the work of the contractor. The COR may recommend to the Contracting Officer whether or not to approve progress payments. A COR is not authorized to change the contract or to obligate the Government to additional costs.

Contractor Quality Control The processes a contractor uses to ensure the quality of work provided for the customer meets the requirements of the contract. (Reference ER 1180-1-6 for Construction Contracts).

Controlled Document: Any written procedure, policy, standard manual, or work instruction (hard copy or electronic media), used to support the QMS. Copies, if distributed in hard copy form, are identified on the master list.

Corps of Engineers Financial Management System (CEFMS): A computer data base and program that contains all financial aspects of Corps business.

Corrective Action: Action taken to eliminate the cause(s) of an existing nonconformity in order to prevent recurrence.

Current File Plan: A plan designating the physical location(s) at which an agency's files are to be maintained, the specific types of files to be maintained, and the activity having custodian responsibility.

Customer: Any organization (e.g. PM, OP) or person requesting a planning, engineering, or construction product or service.

Customer Request: Any request for work (verbal, written, Congressional add, etc.) requiring the use of planning, engineering, or construction expertise in the accomplishment of products.

DD Form 1556 Request, Authorization, Agreement, Certification of Training and Reimbursement: The DD 1556 form officially documents a training instance.

Design-Build: A contract for design and construction services.

Design Documentation Report (DDR): The designing office's record of the total design process, covering design activities from the start of design through completion of construction.

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Design Report: One of a variety of reports that describes engineering and/or design activities. Such reports include DDRs, FDMs, Letter Reports, Major Rehabilitation Reports, etc.

ENG Form 3078: Form used to transmit requests for new guidance/criteria or revisions/corrections to existing guidance/criteria.

Design Report: One of a variety of reports that describes engineering and/or design activities. Such reports include DDRs, FDMs, Letter Reports, Major Rehabilitation Reports, etc.

ENG Form 3078: Form used to transmit requests for new guidance/criteria or revisions/corrections to existing guidance/criteria.

Engineering and Construction/Operations Agreement (ECO): The ECOA is the document that serves as a basis for scheduling resources and allocation of O&M funds. The scope of the ECOA includes all work requested for On-site Operating Project locations, Off-site Operating Project locations, Channels and Harbors, Planning functions, and other miscellaneous O&M work. The agreement includes all tasks that are funded by OP Division and tasks identified as unfunded requirements by OP Division. Budgeted tasks included in the ECOA are not considered financed until a notice-to-proceed (NTP) has been received.

Engineering Considerations and Instructions (ECI): Special considerations and instructions developed for field personnel for a specific project which warrant additional attention or require action that may or may not be detailed in the construction drawings or specifications.

Engineering During Construction (EDC): Activities involving design intent information; an engineering/construction liaison; monitoring the status of projects under construction; making changes to the design of specific portions of a project under construction; partnering activities; contract submittal review and EDC documentation preparation.

Engineering During Construction (EDC) Documents : Typically Site Visit Reports, contract submittal reviews, design notes and/or sketches for revisions to contract plans and specifications (P&S), revised P&S as needed, technical review actions, contract modification forms, Value Engineering document evaluations, HTRW documents, and review documents for As-Constructed drawings, O&M documents and warranty sheets.

Feasibility Cost Sharing Agreement (FCSA) : The legal agreement between the Department of Army, represented by the District Commander, and the non-Federal sponsor to jointly conduct and fund the detailed Feasibility Study.

Feasibility Phase : The time period commencing with issuance of initial Federal feasibility funds following execution of the FCSA and concluding on the date the feasibility report is submitted to OMB or study termination.

Feasibility Study : The detailed analysis of water resources problems and/or opportunities to determine if sufficient merit exists to recommend a plan for authorization.

Feature Design Memorandum (FDM): A report documenting the preliminary design of a specific project or work feature.

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Geographic Information System (GIS): A system of computer hardware, software, and procedures designed to support the capture, management, analysis, and display of spatial reference data for solving complex planning and management problems.

Geospatial Data: Information that identifies geographic location and characteristics of natural or constructed features and boundaries on the earth.

Headquarters, U.S. Army Corps of Engineers (HQUSACE): Head office of the Corps located in Washington, D.C.

Horizontal and Vertical Control: Survey control information of known survey monuments. Maintained information includes coordinates, elevations, and descriptions.

Indefinite Delivery Contract (IDC): A specific type of contracting method used when there is a recurring requirement for a particular type of work, but the timing and/or full extent of the requirement is not certain at the time of contract award. The contract establishes all the terms for the type of work and specific orders are placed when the need arises.

Indefinite Quantity Contract: A variation of an Indefinite Delivery Contract.

Individual Development Plan (IDP): The process which offers a systemic approach for identifying developmental objectives (long-term and short-term), required training, recommended training, and developmental assignments for Corps of Engineers' employees.

Internal Audit: The systematic and independent examination of the quality management system. This is achieved by gathering objective evidence in order to determine whether quality activities and related results comply with established quality procedures and processes and whether these arrangements are implemented effectively and are suitable to achieve objectives.

International Register of Certificated Auditors (IRCA): An international registry of certificated auditors that is administered by the Institute of Quality Assurance in the United Kingdom (Great Britain).

Job Approval Checklist: A certification by the relevant offices that all appropriate BCOE comments have been incorporated in the invitation for bid documents.

Justification for Liquidated Damages: A document providing justification and detailed cost figures for damages incurred by the Government due to construction contractor nonperformance. This document is typically provided by Construction Branch.

Letter Reports: A design report of limited scope that addresses the engineering and environmental features of a project.

Lump Sum Contract: An agreement to pay a specific price when the items called for by the contract have been delivered and accepted. Such contracts are used when a reasonably definite statement of work is available; and fair and reasonable prices can be established at the outset.

Major Rehabilitation Reports: Evaluation reports on operating projects that document the reliability and/or efficiency improvement of major project components, the result of which is deferral of capital outlays and/or enhanced operational efficiency.

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Major Subordinate Command (MSC): A reference to Division offices of the Corps of Engineers.

Management Representative: The member of the management team who shall have defined authority for ensuring that the management system outlined herein is established, implemented and maintained, and reporting on the performance of the system for review and as a basis for improvement.

Mapping: Paper copies and/or electronic files generated by in-house or contract personnel for particular projects.

Memorandum of Agreement (MOA): An agreement between Portland District's organizational representative (often a specific division) and any non-DOD, state, local government agency, etc.

Metadata: Information describing the content, quality conditions, and other characteristics of data.

Modern Army Record-Keeping System (MARKS): A filing system used by the Army controlled by AR25-400-2.

National Economic Development (NED): A term that addresses the economic value of goods and services, when viewed from the Federal perspective. It can describe a benefit category or plan (NED Plan) that reasonably maximize NED benefits, consistent with protecting the Nation's environment.

National Environmental Policy Act (NEPA) Documentation: Discussion of the process and findings, especially applicable to the environment, leading to decisions within the Feasibility Study, as required by the National Environmental Policy Act

Nonconformance: The departure or absence of one or more quality characteristics or quality system elements from specific requirements.

Nonconforming Product: A product which does not conform to specified requirements which can result from:

(1) A design deficiency (a product which contains design errors or omissions, lacks adequate coordination between disciplines, fails to meet specified requirements of the scope of work, or is lacking in the design quality expected).

(2) Errors in guidance or criteria, or lack of understanding of the customer's needs

Nonconformity A specified requirement not fulfilled.

Non-Federal Sponsor: An entity recognized and acknowledged by the Federal Government as having the legal and financial authority to provide cash and property needed to fulfill study or project requirements.

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Notice to Proceed (NTP):

(1) For construction contract work, the letter from the Contracting Officer to the Contractor directing them to begin contract work. This letter is issued after the contract has been awarded and the Contractor has provided performance and payment bonds.

(2) The vehicle which permits initiation of work on assigned OP-funded tasks. An OP memorandum must be received prior to the commencement of work on the task. An OP Division approved work quality plan does not constitute a notice-to-proceed on work for that task.

Official Personnel File: Files that contain complete employee information such as personnel actions, awards, training, performance appraisals, assigned responsibilities and any on-the-job injuries.

Off-Site Work: Programs managed within EC Division because the functional responsibility resides in this Division, e.g. Dam Safety.

On-Site Work: Work requested by Portland District operating facility managers. Typically engineering and design work that results in plans and specifications and a contract for the scoped work.

Partnering: A collaborative process where the Government, the contractor, the using agency, and other stakeholders cooperate as a team to successfully accomplish a project. The Partnering process generally involves team building, establishing mutual goals, and emphasis on communication.

Planning Assistance to States (PAS): Legislative authority authorizing the Corps to cooperate with the States, Tribes, and other public sponsors to provide assistance to support the preparation of comprehensive water and related land resources development plans including watershed and ecosystem planning.

Portland District Project Charts: Project charts that depict specific activities for work. Project charts are prepared, updated, and printed monthly.

Preventive Action: Action taken to eliminate the causes of a potential nonconformity in order to prevent its occurrence.

Procurement Strategy: Techniques and/or methods to be undertaken to assure prompt, cost efficient acquisition of a construction contractor.

Product Development Team (PDT): Individuals of specific technical disciplines/expertise, knowledge and experience involved in and responsible for the creation and development of planning and engineering product(s) within the requirements of the TRP. Team size and composition varies with product size and complexity, scope magnitude, and technical expertise needed. The PDT may be staffed totally or in part by individuals from Portland District, another district, North Pacific Division, other government agencies, Architect-Engineer firms, or special consultants.

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Product Quality Review: The basic level of technical review of planning and engineering products. It is assigned and/or completed by the office responsible for direct development of the product. This review covers, but is not limited to appropriateness of assumptions, data quality, analysis methods, and adherence to Corps and industry standards.

Product Review Team (PRT): The review component in the product development process. Each member of the PRT has a similar technical discipline and requisite work experience identified with the particular product being reviewed. The size and involvement of the review team is dependent on cost, complexity, and size of the product. Large, complex products such as feasibility studies, feature design memoranda, and plans and specifications usually require a more extensive and technically experienced review team for major disciplines and product elements. While the disciplines and work experience levels are similar, personnel are not members of both the PDT and PRT for the same product.

Professional Services: Non-engineering services performed by a professional on either an individual or organizational basis. The primary purpose is the performance of an identifiable task rather than the furnishing of an end item of supply.

Project Files: A file or group of files generated for each project containing appropriate items for the project including correspondence, specifications with amendments, design analysis, cost estimates, funding documentation, technical evaluations, review comments, approval documents and any other item identified in AR 25-400-2, as appropriate.

Project Manager/Project Management (PM): A Planning, Programs, and Project Management Division representative/process with responsibilities for overall schedule, budget, and quality requirements of Portland District work.

Project Management Plan (PMP): The approach, coordination, control, and measurement to be undertaken to assure a product is developed in accordance with customer requirements and quality standards.

Project Study Plan (PSP): The document which contains the scope, schedule and funding required to complete a Feasibility Study. The scope must be sufficiently comprehensive to identify the products, describe the tasks and define the level of detail for the tasks.

Proponent Office: Office responsible for development of, and providing advice and guidance on, a specific QMS procedure.

Purchase Order: A contract with a total cost less than \$100,000.

Purchase Request and Commitment (PR&C): A CEFMS request for goods and services with an estimated price and funding source.

QMS Branch Chiefs The individuals responsible for oversight of, guidance on, and compliance with the Quality Management System. The offices represented include the EC Branch Chiefs.

QMS Tool Kit A template for QMS requirements (e.g. Quality Plan, Technical Review Certification, etc.) available in electronic format.

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Quad Sheets: United States Geodetic Survey (USGS), Census Bureau, Defense Mapping Agency (DMA), state and local mapping.

Quality Assurance (QA):

(1) For construction contract work, a system of controls used by the Government to verify that the Contractor complies with contract requirements on work quality. The Government QA verification includes reviews of contract submittals and field checks of the physical work being constructed.

(2) Activities taken to assure the overall effectiveness of the quality process. Its primary emphasis deals with the prevention of nonconforming product through evaluation and assurance that adequate quality controls are being utilized.

Quality Management System (QMS) The policies and procedures that describe the methods and processes to be followed during development of planning, engineering, and construction products.

Quality Standards: The identification and combination of specific criteria, tasks, prerequisites, reviews, checklists, schedules, and budgets to be set and measured to determine if product development meets customer and technical requirements.

Reconnaissance Phase: The period of time commencing with the obligation of appropriated reconnaissance funds and concluding with execution of the FCSA or study termination.

Reconnaissance Study: An initial analysis of problems and/or opportunities to determine if sufficient merit exists to warrant detailed evaluation in a later phase.

Records: All books, papers, maps, photographs, machine-readable materials, or other documentary materials, regardless of physical form or characteristic, created or received by an agency of the U.S. Government under Federal law or in connection with the transaction of public business and preserved or appropriate preservation by that agency or its legitimate successor as evidence of the organization, functions, policies, decisions, procedures, operations, or other activities of the Government or because of the information value of data in them. (Federal Law-Title 44 US Code 3301.)

Records Coordinator: Appointed individual responsible for the maintaining, servicing, and disposing of records of the office to which assigned.

Records Management Long-term disposition of project files.

Registration Accreditation Board (RAB): An affiliate of the American Society for Quality, which is recognized as the central authority in the United States for registrar accreditation.

Request for Proposal (RFP): A request to a contractor or contractors for a price proposal. For task orders, EC-CR issues an RFP by letter with a statement of work attached. For contract actions that are synopsized, CT issues the RFP and includes not only the statement of work, but numerous other required clauses.

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Requirements Contract: A variation of an Indefinite Delivery Contract.

Resident Management System (RMS) A computerized system used by the Resident Office to manage construction contract documentation. RMS has the capability to keep track of correspondence, modifications, submittals, payments, quality assurance reports, and schedules.

Resource Estimate: An estimate of the labor, contracts, materials, supplies, travel, etc. needed to complete a job.

Responsible Employee: A person designated as the only individual who can authorize other users to originate, approve, or certify purchase requests on a specific work item.

Schedule and Cost Change Request (SACCR): The form to be used when requesting changes to design products.

Section 905(b) Analysis: Refers to the Section in the Water Resources Development Act (WRDA) of 1986. It is also called the Reconnaissance Report. Current guidance is contained in Planning Guidance Memorandum 99-01, dated 03 March 1999. This type of report contains an analysis for determining if there is a Federal interest in continuing detailed planned studies in the feasibility phase.

SF254/255 Forms:

(1) An SF254 Form, Architect-Engineer and Related Services Questionnaire is similar to a general resume, detailing a firm's experience, qualifications, and other data. It is completed by A/E firms interested in doing work for the Corps, and input and maintained in the ACASS system

(2) An SF255 form, Architect-Engineer and Related Services Questionnaire for Specific Project, is similar to the SF 254, but requires much more specific information. It is completed by A/E firms in response to a specific requirement for contract services.

Both forms are used in selecting a firm for a specific contract.

Six-Step Planning Process: The systematic and orderly approach in conducting the planning procedure from the study initiation to completion. The steps begin with identification of problems and opportunities and continue through recommendation of a selected plan which best satisfies the Federal objective and local concerns.

Support for Others: Technical assistance performed by the Corps of Engineers and provided to non-Department of Defense Federal agencies, State, and/or local governments of the United States. The work is funded 100 percent by the Government entity.

Synopsis: A brief statement of the scope of required services. A synopsis typically includes project location, closing date for receipt of responses for A/E Contracts or date of availability of a Request for Proposal, and a point of contact for more information. In addition, for A-E contracts, selection criteria and necessary forms to submit are included in the synopsis.

Task: A work item established at the local level with a system generated code.

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Task Order (TO): A direct written order against an existing IDC to perform specific tasks in accordance with the terms and conditions of the contract. The activities to be performed are separately negotiated and awarded as part of a contract.

Technical Element: Refers to the person or group of people who are the technical experts or technically responsible at a functional level for that portion of the work. For example, EC-HD is technically responsible for the design parameters of the flow characteristics and design of an open channel.

Technical Lead (TL): The individual assigned responsibility for development of a particular product. The TL is responsible for developing, implementing, and maintaining the QP. The TL provides management of the PDT, assures coordination and interaction between teams, and is responsible for the coordination of comment responses and their resolution.

Technical Review: An independent evaluation performed for all planning and engineering products to ensure compliance with applicable laws, regulations, quality requirements, and sound technical practices through independent technical evaluation.

Technical Review Checklist: A guide for checking and reviewing the product for errors, omissions, compliance with requirements, and for determining overall product quality and completeness. Checklists, Engineering Regulations, Engineering Manuals, Technical Manuals, and other guidance and regulations shall be used during review as appropriate.

Technical Review Plan (TRP): A written plan to identify and define actions, schedule, and resources necessary to perform technical review. The TRP serves as guidance to document the review process. The TRP is included as an element of the QP prepared for any planning and engineering product. The scope, work complexity, and multiple-technical discipline (in-house and/or other resources) involvement needed for a specified product determines the TRP level of detail.

Two (2) Year O&M Submissions: The process of forecasting all budgetary items for the O&M program, including information for the upcoming fiscal year and 2 years into the future.

Unique Identifier: A reference marking (e.g. serial number) used to specify a piece of equipment to the exclusion of all others.

Work Item: Manageable components of a project defined by Project Manager that are to be funded and tracked. Work items can be projects established at Headquarters level or subprojects and tasks established at the local level.

Work Scope: A clear definition of product assumptions, tasks, schedule, associated costs, milestones or checkpoints, and coordination requirements.

Working Files: Documents such as rough notes, supporting information, analysis, calculations, or drafts used in the preparation of a formal document or product. Working files are also considered records and are filed under the appropriate MARKS file number.

